CIVIL TECH LABS

Accredited by NABL as per ISO/ IEC 17025 : 2005

#5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867 / Mob.: 96862 31801, Email: civiltechlabs@gmail.com

T-2659

To,

Assistant Executive Engineer,
Yelahanka New Town Sub Division,
BBMP.

09th February 2015

Dear Sir,

Sub: Testing of Wet Mix Macadam.

As requested, tests on physical properties were carried out for the Wet Mix Macadam supplied by you, for the work of '**Improvements to roads Green square Ananthpura in Attur Ward No. 03.**'

Please find the enclosed Test Reports of the above.

Thanking You,
For Civil Tech Labs

CIVIL TECH LABS BANGALORE

(KHUSHROO L.)
Quality Manager

CIVIL TECH LABS
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TEST REPORT

GRADATION TEST ON WET MIX MACADAM

Name & Address of the Customer	AEE, Yelahanka New Town Sub Division, BBMP
Name of Work	Improvements to ..nda Green square Ananthpura in Attur Ward No. 03.
Name of the Ageney	Sri. Y. A. Dhanashekar.
Date of Testing	09/02/2015
Technical Reference	MORTH Table 400.11

	Sample-1		
IS Sieve Designation (mm)	**% By Weight Passing IS Sieve**	**Actual % By Weight Passing IS Sieve**	**Remarks**
53	100	**100**	**Satisfy the Requirements**
45	95-100	**98.4**	
22.4	60-80	**73.6**	
11.2	40-60	**52.4**	
4.75	25-40	**32.6**	
2.36	15-30	**21.7**	
0.6	8-22	**17.4**	
0.075	0-8	**6.8**	

Note:

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3.Any correction invalidates this report.

4.The results are based on the test conducted on samples supplied by the customer.

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Lab Incharge
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TEST REPORT
GRADATION TEST ON WET MIX MACADAM

Name & Address of the Customer	AEE, Yelahanka New Town Sub Division, BBMP
Name of Work	Improvements to roads Green square Ananthpura in Attur Ward No. 03.
Name of the Agency	Sri. Y. A. Dhanashekar.
Date of Testing	09/02/2015
Technical Reference	MORTH Table 400-11

	Sample-2		
IS Sieve Designation (mm)	% By Weight Passing IS Sieve	Actual % By Weight Passing IS Sieve	Remarks
53	100	100	Satisfy the Requirements
45	95-100	97.4	
22.4	60-80	72.6	
11.2	40-60	53.4	
4.75	25-40	31.6	
2.36	15-30	22.7	
0.6	8-22	18.4	
0.075	0-8	6.6	

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TEST REPORT
GRADATION TEST ON WET MIX MACADAM

Name & Address of the Customer	AEE, Yelahanka New Town Sub Division, BSMP
Name of Work	Improvements to roads Green square Amanthpura in Attur Ward No: 03
Name of the Agency	Sri. Y. A. Dhanasheker
Date of Testing	09/02/2015
Technical Reference	MORTH Table 400-11

	Sample-3		
IS Sieve Designation (mm)	% By Weight Passing IS Sieve	Actual % By Weight Passing IS Sieve	Remarks
53	100	100	Satisfy the Requirements
45	95-100	98.4	
22.4	60-80	73.6	
11.2	40-60	54.8	
4.75	25-40	33.5	
2.36	15-30	21.8	
0.6	8-22	17.2	
0.075	0-8	7.1	

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Lab Incharge
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TEST REPORT

TEST ON AGGREGATES [AIV & Combined Flakiness & Elongation Index]

Wet Mix Macadam

Name & Address of the Customer	AEE, Yelahanka New Town Sub Division, BBMP
Name of Work	Improvements to roads Green square Anantnagara in Attur Ward No: 02.
Agency of the Name	Sri. Y. A. Dhanesheka.
Date of Testing	09/02/2015
Reference	MORTH Table 400-10

Sample No	Aggregate Impact Value	Average AIV in %	Remarks
1	21.6	22.0	Satisfactory [As per MORTH for WMM, Maximum allowed AIV is 30 %]
2	22.3		

Test	Result in %	Combined Flakiness & Elongation Index 'C-F&E' in %	Remarks
Flakiness Index	10.6	23.1	Satisfactory [As per MORTH for WMM, Maximum allowed 'C-F&E' is 30 %]
Elongation Index	12.5		

Note:

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A Signature to qualify

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T-2654

To,

Assistant Executive Engineer,
Yelahanka New Town Sub Division,
BBMP.

17th February 2015

Dear Sir,

Sub: Testing of Semi Dense Bituminous Concrete.

As requested, tests on physical properties were carried out for the Semi Dense Bituminous Concrete supplied by you, for the work of **'Improvements to roads Green square Ananthpura in Attur Ward No. 03.'**

Please find the enclosed Test Reports of the above.

Thanking You,
For Civil Tech Labs

CIVIL TECH LABS BANGALORE

(KHUSHBOO L.)
Quality Manager

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ಬ.ಬ.ಮಂ.ಪ. ಬೆಂಗಳೂರು-106

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TEST REPORT
TESTS ON BITUMEN SAMPLE

Name & Address of the Customer	AEE, Yelahanka New Town Sub Division, BBMP
Name of Work	Improvements to roads Green square Ananthpura in Ward No. 63
Name of the Agency	Sri. V. A. Dhanashekar.
Date of Testing	17/02/2015

Paving Grade of Bitumen - 80-100 Grade

Sl.No.	Name of the Test	Test As Per IS Code	Result	Specification as Per IS 73 : 2006	Remarks
1	Specific Gravity @ 27 °C	IS : 1202-1978	0.99	0.97 - 1.02	Pass
2	Flash Point °C	IS : 1209-1978	233	Minimum 220 °C	Pass
3	Fire Point °C	IS : 1209-1978	264	Not Specified	Pass
4	Softening Point (R&B) °C	IS : 1205-1978	53	Minimum 40 °C	Pass
5	Penetration @ 25 °C 100g & 5 S in 0.1 mm	IS : 1203-1978	83	80-100	PASS
6	Ductility @ 25°C in Cm	IS : 1208-1978	81.2	Minimum 75 cm	Pass

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TEST REPORT

STRIPPING TEST OF ROAD AGGREGATES

Semi Dense Bitumenous Concrete (SDBC)

Name & Address of the Customer	AEE, Yelahanka New Town Sub Division, BBMP
Name of Work	Improvements to roads Green square Ananthpura in Attur Ward No. 03
Name of Agency	Sri Y. A. Dharmashekar.
Date of Testing	17/02/2015

Method of Test	Observation No.	Uncovered Area/Stripping in %	Average Stripping Value in %	As Per Morth Table 500-14	Remarks
IS:6241-1971 Reaffirmed 2003	1	3.58	3.31	5 % Maximum	Satisfactory
	2	3.47			
	3	3.62			

Notes:
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Kushboo

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Lab Incharge
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SC EC 17025 : 2005
Bangalore - 560027
T-2654

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TEST REPORT

WATER ABSORPTION TEST OF ROAD AGGREGATES

Semi Dense Bitumenous Concrete (SDBC)

Name & Address of the Customer	AEE, Yelahanka New Town Sub Division, BWSSB
Name of Work	Improvements to roads Green square Ananthpura in Attur Ward No. 03.
Name of Agency	Sri. Y. A. Dhanashekar
Date of Testing	17/02/2015

Method of Test	Sample No.	Water Absorption in %	Average Water Absorption in %	As per MORTH Table 500-14	Remarks
IS: 2386 (Part II)	1	0.77	0.82	2 % Maximum	Satisfactory
	2	0.82			
	3	0.86			

Note:
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ಬಿ.ಡಬ್ಲ್ಯು.ಎಸ್.ಎಸ್.ಬಿ. ಬೆಂಗಳೂರು-೫೯

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TEST REPORT

TEST ON AGGREGATES [AIV & Combined Flakiness & Elongation Index]

Semi Dense Bitumenous Concrete

Name & Address of the Customer	AEE: Yelahanka New Town Sub Division, BBMP
Name of Work	Improvements to roads Green square Anandhpura in Attur Ward No. 03.
Name of Agency	Sri. Y. A. Dhanushekar
Date of Testing	17/02/2015
Reference	MORTH Table 500-14

Sl. No	Aggregate Impact Value 'AIV' in %	Average AIV in %	Remarks
1	21.8	22.1	Satisfactory. [As per MORTH for SDBC, Maximum allowed AIV is 27 %]
2	22.3		

Test	Result in %	Combined Flakiness & Elongation Index 'C-F&E' in %	Remarks
Flakiness Index	11.5	24.7	Satisfactory [As per MORTH for SDBC, Maximum allowed C-F&E is 30 %]
Elongation Index	13.2		

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ಪಾ.ಪಂ.ಪ, ಬೆಂಗಳೂರು-೦೬

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TEST REPORT

TEST ON THE DETERMINATION OF BITUMEN CONTENT ON SEMI DENSE BITUMINOUS CONCRETE MIX-GRADE 2

Name & Address of the Customer	AEE, Yelahanka New Town Sub Division, BMSP
Name of Work	Improvements to roads Green square Amanthpura in Attur Ward No. 03.
Name of the Agency	Sri. Y. A. Ramamohan
Date of Testing	17/02/2015

A)

Sl. No.	Test	Test Method	Technical Reference
1	Extraction of mineral aggregate	Test Method A (Centrifuge Method)	ASTM: D2172/ D2172M-11
2	Determination of amount of mineral matter/fines in the extract	Ashing Method	

B)

Specification: As Per MORTH (4th Revision) Table 500-15, Bitumen Content for SDBC Grade-2 is MIN 5%

Sl. No.	Description	Values
1	Weight of bituminous mixture before extraction test, W_1 g	2000
2	Weight of mineral aggregate obtained from centrifuge extractor, W_2 g	1880.6
3	Weight of mineral matter in the total volume of extract (by ashing), W_3 g	12.2
4	Total weight of aggregate in the bituminous mixture, W_4 g = (W_2 +W_3) g	1895.8
5	Total weight of Bitumen extracted from the mixture, W_5 g = (W_1-W_4) g	104.2
6	Bitumen content in %, (W_5/W_1) %	5.21

Remarks	**Satisfies the requirements.**

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ಜ.ಪಿ.ಎಂ.ಸಿ. ಬೆಂಗಳೂರು-೬೫

Lab Incharge
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TEST REPORT

GRADATION TEST ON SEMI DENSE BITUMINOUS CONCRETE MIX GRADE - 2

Name & Address of the Customer	AEE, Yelahanka New Town Sub Division, BBMP
Name of Work	Improvements to roads Green square Ananthpura in Attur Ward No. 03
Name of the Agency	Sri. Y. A. Dhanasekar.
Date of Testing	17/02/2015
Technical Reference	IS : 2386(Part I)-1963 (Reaffirmed 2011)

	Sample-1		
IS Sieve Designation (mm)	% By Weight Passing IS Sieve as per MORTH (4th Revision) Table 500-15 for SDBC Grade-2	Actual % By Weight Passing IS Sieve	Remarks
13.2	100	100	Satisfies the requirements
9.5	90-100	97.4	
4.75	35-51	42.6	
2.36	24-39	28.4	
1.18	15-30	22.6	
0.3	9-19	17.1	
0.075	3-8	6.7	

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TEST REPORT

GRADATION TEST ON SEMI DENSE BITUMINOUS CONCRETE MIX GRADE - 2

Name & Address of the Customer	AEE, Yelahanka New Town Sub Division, BBMP
Name of Work	Improvements to roads Circle square Ananthpura in Attur Ward No. 03
Name of the Agency	Sri. Y. A. Dhanashekar.
Date of Testing	17/02/2015
Technical Reference	IS - 3386(Part I)-1963 (Reaffirmed 2011)

	Sample-2		
IS Sieve Designation (mm)	% By Weight Passing IS Sieve as per MORTH (4th Revision) Table 500-15 for SDBC Grade-2	Actual % By Weight Passing IS Sieve	Remarks
13.2	100	100	Satisfies the requirements
9.5	90-100	98.8	
4.75	35-51	43.6	
2.36	21-39	27.4	
1.18	15-30	23.6	
0.3	9-19	16.5	
0.075	3-8	6.3	

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